REMARKS

Applicant thanks the Examiner for examination of the application.

Claims 2 and 3 have been canceled. The Claim limitations of Claims 2 and 3 have been added to Amended Claim 1.

Claims 1 and 16 have been amended to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner is requested to withdraw the rejection of claims 1, 5, 7-9, 13-15, and 24 under 35 U.S.C. § 103(a) as being unpatentable over Hoashi et al. (U. S. Patent No. 5,870,684) in view of Link, II et al. (U. S. Patent No. 6,735,457).

Amended Claim 1 recites:

> An apparatus, comprising:
> a microphone;
> a codifier coupled to the microphone;
> a central processing unit coupled to the codifier to control the codifier to convert an analog signal sensed by the microphone into a digital signal;
> at least one alert generator coupled to the central processing unit for generation of the at least one alert signal;
> a memory coupled to the central processing unit for storage of an at least one predetermined value;
> a programmable storage device readable by the central processing unit, the programmable storage device tangibly embodying a program of instructions executable by the central processing unit, wherein the program of instructions and the at least one predetermined value define an alert sequence definition;
> the central processing unit responsive to the digital signal and the alert sequence definition to select an alert signal by generating at least one control signal for the at least one alert generator;

a transceiver coupled to the central processing unit to communicate with an external device;

a decoder coupled to the central processing unit;

a speaker mounted in the housing, the speaker coupled to the decoder;

the central processing unit responsive to a transmitted signal of the external device received by the transceiver wherein the central processing unit generates a control signal for the speaker to generate a first analog signal and the central processing unit generates a control signal for the codifier to convert the reflected first analog signal sensed by the microphone into a first digital signal, wherein, when the apparatus is placed in a container, the first analog signal is reflected back toward the apparatus and the codifier will convert the reflected first analog signal into the first digital signal at a predetermined delayed interval; and

the central processing unit responsive to the first digital signal to determine the strength of the reflected first analog signal wherein the strength is compared with at least one of the at least one predetermined thresholds stored in memory to determine an optimum alert signal.

Hoashi et al. teaches a radio communication apparatus that includes noise sensing means 110 and alert tone loudening means 120. The noise sensing means 110 senses a noise level around the apparatus and generates a control signal based on the noise level. The alert tone loudening means 120 increases the volume of an alert tone in response to the control signal. With these means 110 and 120, the apparatus is capable of loudening the alert tone in a noisy environment. The noise sensing means 110 includes a microphone 111 for transforming noise around the apparatus to a corresponding electric signal. A controller 112 outputs a sampling signal at predetermined intervals while the apparatus is in a stand-by state. A noise level measurement 113 samples the above electric signal in synchronism with the sampling signal output from the controller 112, digitizes the electric signal, and thereby determines the varying noise level. A control signal generator 114 produces a mean value from the output of the

measurement 113 and a reference value, and generates a control signal corresponding to the means value. The alert tone loudening means 120 includes an alert tone generator 121 for generating an electric signal representative of an alert tone. A volume adjustment 122 adjusts the electric signal output from the alert tone generator 121 in accordance with the control signal output from the control signal generator 114. A speaker 123 outputs the alert tone adjusted by the adjustment 122.

Link, II et al. teaches a wireless telephone comprising a receiver to receive a DTMF (dual tone multi-frequency) audio tone transmitted to the wireless telephone during a conversation mode of the wireless telephone, and a DTMF decoder coupled to the receiver to decode the DTMF audio tone and to responsively generate a decoded signal representing dialed information corresponding to the DTMF audio tone during the conversation mode of the wireless telephone. A wireline telephone may also include a DTMF decoder and a memory to decode and store received DTMF digits. A telephone embodying the present invention thus captures for its user the telephone numbers or other numerical information transmitted by the opposite party in the DTMF form during a conversation, without requiring the user to disrupt the conversation, e.g., by looking for a paper and pen. Thus, the user may not need to personally remember or write down the telephone number or other numerical information received while the user is on phone.

Amended Claim 1 requires:

> a speaker mounted in the housing, the speaker coupled to the decoder;
>
> the central processing unit responsive to a transmitted signal of the external device received by the transceiver wherein the central processing unit generates a control signal for the speaker to generate a first analog signal and the central processing unit

generates a control signal for the codifier to convert the reflected first analog signal sensed by the microphone into a first digital signal, wherein, when the apparatus is placed in a container, the first analog signal is reflected back toward the apparatus and the codifier will convert the reflected first analog signal into the first digital signal at a predetermined delayed interval; and

the central processing unit responsive to the first digital signal to determine the strength of the reflected first analog signal wherein the strength is compared with at least one of the at least one predetermined thresholds stored in memory to determine an optimum alert signal.

Specifically, as is stated in the Background of the Specification on page 2, lines 8-11, that "(c)alls, messages, and reminder-alarms are often missed due to unnoticed alerts, either because of environments where the ambient noise level is very high or due to the location of the wireless devices within a purse, briefcase or other carrying accessory."

One aspect of the invention is defined on page 6, lines 22-29 of the Specification is that "the response to a transmitted signal from an external device (not shown), the central processing unit 114 sends a control signal to the speaker 128 to generate a tone. In addition, the central processing unit 114 sends a control signal to the codifier 112 to convert the (reflected) analog signal sensed by microphone 110 into a digital signal. The central processing unit 114 processes the digital signal using the stored threshold coefficients and the program of instructions to determine a preferred alert signal and sends at least one control signal to the selected alert signal generator."

In addition, this invention includes yet another novel aspect as recited in the Specification on page 6,line 30 - page 7, line 10 that "the user will be able to "train" the wireless

device 100 to respond however the user chooses. The display 118 is capable of displaying menus of information which may be selected. A menu designated for the training of the intelligent alerting system may include a default set and reset feature whereby the user sets all of the defaulted values after a series of questions have been answered using a selection key. Within this menu, the user may define the different alerts for different types of environments, such as "quiet", "noisy", "day", "night", "belt, "purse", etc. A standard defaulted optimum alert sequence definition may be maintained within memory 102. The menu may include an option to modify the last alert response given based upon the environment of the wireless device. The user may select the preferred response and store this response so that future determinations will include the user's input."

The combination of Hoashi et al. in view of Link, II et al. does not provide an apparatus with the required features of an apparatus as is required by Claim 1. As claimed in the Amended Claim 1, the apparatus has the capability of detecting when it is inside of a container, such as a purse, pocket, drawer, and adjusting the alert sequence based upon this information. Specifically, the speaker of the apparatus sends a signal that is reflected back towards the apparatus if the apparatus is placed in a container. The microphone senses this reflected signal and the central processing unit responsive to this reflected signal generates an optimum alert signal sequence.

The combination of Hoashi et al. in view of Link, II et al. does not teach nor suggest:

> a speaker mounted in the housing, the speaker coupled to the decoder;
>
> the central processing unit responsive to a transmitted signal of the external device received by the transceiver wherein the central processing unit generates a control signal for the speaker to generate

a first analog signal and the central processing unit generates a control signal for the codifier to convert the reflected first analog signal sensed by the microphone into a first digital signal, wherein, when the apparatus is placed in a container, the first analog signal is reflected back toward the apparatus and the codifier will convert the reflected first analog signal into the first digital signal at a predetermined delayed interval; and

the central processing unit responsive to the first digital signal to determine the strength of the reflected first analog signal wherein the strength is compared with at least one of the at least one predetermined thresholds stored in memory to determine an optimum alert signal.

as is required by Amended Claim 1. Accordingly, it would be necessary to make modifications not taught in the prior art to combine the references in the manner suggested by the Examiner. Thus, it would not have been obvious to one skilled in the art to combine the references in the manner suggested.

Moreover, since the combination of Hoashi et al. in view of Link, II et al. does not show nor suggest the apparatus of amended Claim 1, Claim 1 is unanticipated and unobvious over Hoashi et al. in view of Link, II et al. as recited by Examiner.

Dependent claims 4 - 23 are also allowable as depending on allowable independent amended Claim 1 and including further limitations that distinguish over the art. Claim 4 provides that the at least one alert generator includes a display. Claim 5 provides that the at least one alert generator includes an audio alert generator. Claim 6 provides that the central processing unit responsive to the alert sequence definition adjusts the type of audible alert signal. Claim 7 provides that the central processing unit responsive to the alert sequence definition adjusts the volume of the audible alert signal. Claim 8 provides that the central processing unit responsive to the

alert sequence definition adjust the frequency of the audible alert signal. Claim 9 provides that the central processing unit responsive to the alert sequence definition, adjusts the interval of time for silence between a first and a second audible alert signal. Claim 10 provides that the at least one alert generator includes a tactile alert generator.

Claim 11 provides that the apparatus further comprises at least one manually actuated user input coupled to the central processing unit. Claim 12 provides that the apparatus further comprises at least one manually actuated user input coupled to the central processing unit. Claim 13 provides that the apparatus further comprises a housing wherein the microphone, the speaker, the transceiver and the at least one manually actuated user input are mounted in the housing. Claims 14 - 17, 19, and 23 at least provide claim differentiation. Claim 18 provides that the apparatus further comprises a radio link transceiver coupled to the central processing unit. Claim 20 provides that the apparatus further comprises a light sensor coupled to the central processing unit. Claim 21 provides that the apparatus further comprises a motion sensor coupled to the central processing unit. Claim 22 provides that the apparatus further comprises a temperature sensor coupled to the central processing unit.

Amended Claim 24 recites:

> A method of generating an optimum alerting sequence for a wireless communication device having a central processing unit, a codifier, a memory, a programmable storage device tangibly embodying a program of instructions, plurality of alert generators, comprising the steps of:
>
> detecting, by the central processing unit, an incoming call;
>
> generating a first analog signal by a speaker, wherein when the apparatus is in a container, having an interior surface, the first analog signal

will be reflected off of the interior surface of the container;

sending a control signal to the codifier coupled to a microphone to receive the reflected first analog signal sensed at the microphone;

converting the reflected first analog signal to a first digital signal;

retrieving a predetermined set of values and coefficients from memory;

determining the strength of the reflected first analog signal by the central processing unit responsive to the first digital signal such that the strength is compared with at least one predetermined threshold stored in a memory as input to determine an optimum alert signal;

processing the first digital signal by the central processing unit to determine an optimum alerting sequence using a predetermine set of values, coefficients, and the first digital signal as inputs for the program of instructions tangibly embodied in the programmable storage device; and

generating an alert signal based upon the output of the program of instructions.

Hoashi et al. teaches a radio communication system as recited previously.

Link, II et al. teaches the wireless telephone as recited previously.

The combination of Hoashi et al. in view of Link, II et al. does not provide a method of generating an optimum alerting sequence for a wireless communication device having a central processing unit, a codifier, a memory, a programmable storage device tangibly embodying a program of instructions, and a plurality of alert generator with the required features of an apparatus as is required by Claim 24.

As claimed in the Amended Claim 24, the method of the generating an optimum alerting sequence must have the capability of detecting when the wireless communication device is inside of

a container, such as a purse, pocket, drawer, and adjusting the alert sequence based upon this information. Specifically, the speaker of the wireless communication device sends a signal that is reflected back towards the apparatus if the wireless communication device is placed in a container. The microphone senses this reflected signal and the central processing unit responsive to this reflected signal generates an optimum alert signal sequence.

Specifically, the amended Claim 24 requires:

> generating a first analog signal by a speaker, wherein when the apparatus is in a container, having an interior surface, the first analog signal will be reflected off of the interior surface of the container;
>
> sending a control signal to the codifier coupled to a microphone to receive the reflected first analog signal sensed at the microphone;
>
> converting the reflected first analog signal to a first digital signal;
>
> retrieving a predetermined set of values and coefficients from memory;
>
> determining the strength of the reflected first analog signal by the central processing unit responsive to the first digital signal such that the strength is compared with at least one predetermined threshold stored in a memory as input to determine an optimum alert signal;
>
> processing the first digital signal by the central processing unit to determine an optimum alerting sequence using a predetermine set of values, coefficients, and the first digital signal as inputs for the program of instructions tangibly embodied in the programmable storage device; and
>
> generating an alert signal based upon the output of the program of instructions.

The combination of Hoashi et al. in view of Link, II et al. does not teach nor suggest this method of generating an optimum alerting sequence for a wireless communication device as is required by Amended Claim 24. Accordingly, it would be necessary to make modifications not taught in the prior art to combine the references in the manner suggested by the Examiner. Thus, it

would not have been obvious to one skilled in the art to combine the references in the manner suggested.

Moreover, since the combination of Hoashi et al. in view of Link, II et al. does not show nor suggest the apparatus of amended Claim 24, Claim 24 is unanticipated and unobvious over Hoashi et al. in view of Link, II et al. as recited by Examiner.

Dependent claims 25 and 26 are also allowable as depending on allowable independent amended Claim 24 and including further limitations that distinguish over the art. Claim 25 provides that the program of instructions includes speech recognition processing instructions. Claim 26 provides that the program of instructions includes neutron network processing instructions to determine the optimum alert sequence.

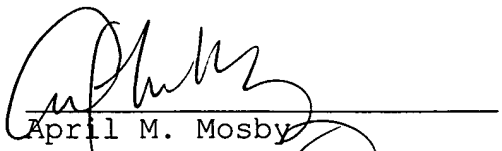
Applicants have carefully reviewed the additional references, Patent numbers 6,625,474, 5,696,497, 6,026,358, 6,615,057, 6,748,210, and 6,408, 187 made of record by the Examiner. Applicants believe that neither of these references made of record, taken singly on in any permissible combination, affect the assertion of patentability of claims 1 and 4-26 in the present application.

Claims 1 and 4-26 stand allowable.

This Amendment, submitted in response to the outstanding office action dated November 17, 2004, is believed fully responsive to each point of objection or rejection raised therein.

The Claims 1 and 4-26 distinguish over the cited references and the application is in allowable form. Applicant respectfully requests reconsideration or further examination and allowance of the application.

Respectfully submitted,



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